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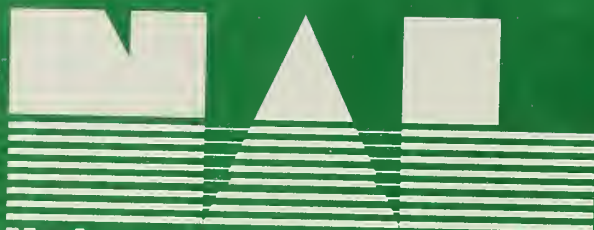
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**United States
Department of
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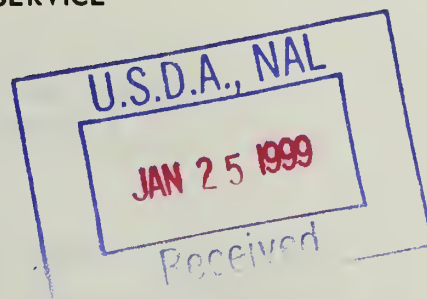


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UNITED STATES DEPARTMENT OF AGRICULTURE

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**UNITED STATES
STANDARDS**
for grades of
**CANNED
WHITE POTATOES**



EFFECTIVE FEBRUARY 10, 1950

First Issue

1957 JUL 1

This is the first issue of the United States Standards for Grades of Canned White Potatoes. These standards are issued by the Department after careful consideration of all data and views submitted.

These standards were recodified in the Federal Register of December 9, 1953 (18 F. R. 8044) and no change was made except in the format. Section 52.1823 was amended (22 F.R. 3535) to become effective July 1, 1957.

As in the case of other standards for processed fruits and vegetables, these standards are designed to serve as a convenient basis for sales, for establishing quality control programs, and for determining loan values. They will also serve as a basis for the inspection of this commodity by Federal inspection service, which is available for the inspection of other processed products as well.

The Department welcomes suggestions which might aid in improving these standards in future revisions. Comments may be submitted to, and copies of these standards obtained from:

Chief, Processed Products Standardization
and Inspection Branch
Fruit and Vegetable Division
Agricultural Marketing Service
United States Department of Agriculture
Washington 25, D. C.

UNITED STATES STANDARDS FOR GRADES OF CANNED WHITE POTATOES ¹

Effective February 10, 1950

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IDENTITY, STYLES, AND GRADES

§ 52.1811 *Identity.* "Canned white potatoes" means canned potatoes as defined in the definitions and standards of identity for canned vegetables other than those specifically regulated, as amended

for canned potatoes (21 CFR 52.990 (c) (3)), issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.1812 *Styles of canned white potatoes.* For the purpose of the grade standards in this subpart, the canned white potatoes are properly peeled prior to canning; "unit" means an individual potato or a portion of a potato; and the various styles of the canned product are as follows:

(a) "Whole" or "whole potatoes" is the style that consists of units that are whole potatoes that are of the approximate conformation of the prepared potatoes.

(b) "Slices," "sliced," or "sliced potatoes" is the style that consists of units that are potato slices of practically uniform thickness.

(c) "Dice," "diced," or "diced potatoes" is the style that consists of units that are approximate cubes.

(d) "Shoestring," "French style," "Julienne," "shoestring potatoes," "French-style potatoes," or "Julienne potatoes" is the style that consists of units that are potato strips of varying lengths.

(e) "Pieces" is the style that consists of units (including, but not being limited to, "orange cuts" and "quarters") other than those comprising any of the foregoing styles or of a mixture of units comprising any two or more styles.

§ 52.1813 *Grades of canned white potatoes.* (a) "U. S. Grade A" or "U. S. Fancy" is the quality of canned white potatoes that possess similar varietal

¹ The requirements of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

characteristics; possess a good color; are practically free from defects; possess a good texture; possess a normal flavor and odor; are at least fairly uniform in size and shape; and score not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U. S. Grade C" or "U. S. Standard" is the quality of canned white potatoes that may or may not possess similar varietal characteristics; possess a fairly good color; are fairly free from defects; possess a fairly good texture; possess a normal flavor and odor; may or may not be fairly uniform in size and shape; and score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U. S. Grade D" or "Substandard" is the quality of canned white potatoes that fail to meet the requirements of U. S. Grade C or U. S. Standard.

FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.1814 *Recommended fill of container.* The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of canned white potatoes be filled with white potatoes as full as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the total capacity of the container.

§ 52.1815 *Recommended minimum drained weight.* The minimum drained weight recommendations in Table No. I of this section are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades. The drained weight of canned white potatoes is determined by emptying the contents of the container upon a circular sieve of proper diameter containing 8 meshes to the inch (0.097-inch square openings) and allowing to drain for 2 minutes. A sieve 8 inches in diameter is used for containers the equivalent of No. 3 size cans (404 x 414) and

smaller, and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can (404 x 414).

TABLE NO. I

Recommended minimum drained weights
for canned white potatoes

Container size or designation:	<i>All styles</i>
No. 2-----	13 ounces
No. 2½-----	19 ounces
No. 10-----	74 ounces

SIZES

§ 52.1816 *Sizes of canned whole white potatoes.* The size of a whole potato is determined by its diameter which is the greatest dimension measured at right angles to its greatest cross section length. The designations of the various sizes of such potatoes are shown in Table No. II of this section.

TABLE NO. II

Sizes of canned whole white potatoes

Word designation	Number designation	Diameter (in inches)
Tiny-----	Size 1-----	1 inch or less.
Small-----	Size 2-----	Over 1 inch to, and including, 1½ inches.
Medium--	Size 3-----	Over 1½ inches.

FACTORS OF QUALITY

§ 52.1817 *Ascertaining the grade.* (a) The grade of canned white potatoes may be ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, uniformity of size and shape, absence of defects, and texture.

(b) The relative importance of each factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

<i>Factors</i>	<i>Points</i>
Color-----	20
Uniformity of size and shape-----	20
Absence of defects-----	40
Texture-----	20
Total score-----	100

(c) "Normal flavor and odor" means that the product is free from objectionable odors and objectionable flavors of any kind.

§ 52.1818 *Ascertaining the rating for each factor.* The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.1819 *Color—(a) (A) classification.* Canned white potatoes that possess a good color may be given a score of 17 to 20 points. "Good color" means that the canned white potatoes, exclusive of the units that are blemished by discoloration, are practically free from oxidation and possess a practically uniform, light color typical of canned white potatoes processed from potatoes of similar varietal characteristics.

(b) (C) *classification.* If the canned white potatoes possess a fairly good color, a score of 14 to 16 points may be given. Canned white potatoes that fall into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the canned white potatoes, exclusive of units that are blemished by discoloration, possess a fairly uniform color typical of canned white potatoes although the color of the potatoes, whether individually or in combination, may be variable, light, dull, grayish-white, yellow-white, or watery-white (semi-translucent), or indicative of slight oxidation, or slight discoloration but not off-color.

(c) (SStd) *classification.* Canned white potatoes that for any reason fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above U. S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1820 *Uniformity of size and shape—(a) (A) classification.* Canned

white potatoes that are practically uniform in size and shape may be given a score of 17 to 20 points. "Practically uniform in size and shape" has the following meanings with respect to the various styles of canned white potatoes:

(1) *Whole potatoes.* The size of each whole potato is not more than 2 inches in diameter, measured as aforesaid; and the weight of the largest whole potato is not more than three times the weight of the second smallest whole potato.

(2) *Sliced potatoes.* The diameter of any slice is the shortest diameter across the surface of the slice. The individual slice is not more than $\frac{3}{4}$ inch in thickness when measured at the thickest portion; the size of each slice is not more than 2 inches in diameter, measured as aforesaid; and the diameter of the largest slice is not greater than one and one-half times the diameter of the second smallest slice.

(3) *Diced potatoes.* The units are practically uniform in size and shape; and the aggregate weight of the units which are smaller than one-half of a cube, the units which are larger than a $\frac{1}{2}$ -inch cube, and the units which are irregular in shape does not exceed 10 percent of the weight of all units.

(4) *Shoestring potatoes.* The strips of potatoes are practically uniform in thickness and the aggregate weight of all strips less than $\frac{1}{2}$ inch in length does not exceed 10 percent of the weight of all the strips.

(5) *Pieces.* The individual units each weigh not less than $\frac{1}{2}$ ounce nor more than 2 ounces and the weight of the largest unit is not more than twice the weight of the second smallest unit.

(b) (C) *classification.* If the canned white potatoes are fairly uniform in size and shape, a score of 14 to 16 points may be given. "Fairly uniform in size and shape" has the following meanings with respect to the various styles of canned white potatoes:

(1) *Whole potatoes.* The size of each whole potato may be more than 2 inches in diameter but not more than $2\frac{1}{2}$ inches in diameter, measured as aforesaid; and the weight of the largest whole potato

is not more than four times the weight of the second smallest whole potato.

(2) *Sliced potatoes*. The diameter of any slice is the shortest diameter across the surface of the slice. The individual slice is not more than 1 inch in thickness when measured at the thickest portion; the size of each slice is not more than 2½ inches in diameter, measured as aforesaid; and the diameter of the largest slice is not more than twice the diameter of the second smallest slice.

(3) *Diced potatoes*. The units are fairly uniform in size and shape; and the aggregate weight of the units which are smaller than one-half of a cube, the units which are larger than ¾-inch cubes, and the units which are irregular in shape does not exceed 25 percent of the weight of all units.

(4) *Shoestring potatoes*. The strips of potatoes are fairly uniform in thickness and the aggregate weight of all strips less than ½ inch in length does not exceed 25 percent of the weight of all the strips.

(5) *Pieces*. The individual units each weigh not less than ¼ ounce nor more than 3 ounces and the weight of the largest unit is not more than four times the weight of the second smallest unit.

(c) (*Std*) *classification*. Canned white potatoes that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule).

§ 52.1821 *Absence of defects*—(a) *General*. The factor of absence of defects refers to the degree of freedom from harmless extraneous material, grit, peel, blemished units, and mechanical damage.

(1) "Harmless extraneous material" means vegetable substances such as weeds, grass, and leaves and any portions thereof that are harmless.

(2) "Grit" means sand, and other rough, hard particles of earthy sediment.

(3) "Blemished" means affected by brown or black surface or internal dis-

coloration, concentrated areas that are otherwise discolored, discolored eyes, unpeeled eyes, hollow heart, scab, or other means when the blemishes, singly or in combination on a unit, materially affect the appearance or eating quality of the unit.

(4) "Seriously blemished" means blemished to such an extent that the appearance or eating quality of the unit is seriously affected.

(5) "Mechanical damage" means moderate trimming or gouges due to the trimming of a whole potato which materially affect the appearance of the whole potato. Slight cuts or slight indentations due to trimming are not considered mechanical damage.

(6) "Serious mechanical damage" means broken units, serious trimming, or deep gouges due to the trimming of a whole potato which seriously affect the appearance of the whole potato and destroy the conformation of the unit.

(b) (A) *classification*. Canned white potatoes that are practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" has the following meanings with respect to the various styles of canned white potatoes:

(1) *Whole*. No harmless extraneous material or grit is present; not more than ½ square inch, in the aggregate, of peel may be present for each 20 ounces of net weight; and the aggregate weight of potatoes that are blemished or seriously blemished and potatoes that possess mechanical damage or serious mechanical damage does not exceed 20 percent of the weight of all the units, but of such 20 percent not more than one-fourth thereof or one potato, whichever is the greater in weight, may be seriously blemished or possess serious mechanical damage.

(2) *Sliced; pieces*. No harmless extraneous material or grit is present; not more than ½ square inch, in the aggregate, of peel may be present for each 20 ounces of net weight; and the aggregate weight of units that are blemished and units that are seriously blemished does not exceed 10 percent of the weight of all

the units, but of such 10 percent not more than one-fourth thereof or one unit, whichever is the greater in weight, may be seriously blemished.

(3) *Diced; shoestring.* No harmless extraneous material or grit is present; not more than $\frac{1}{2}$ square inch, in the aggregate, of peel may be present for each 20 ounces of net weight; and the aggregate weight of units that are blemished and units that are seriously blemished does not exceed 4 percent of the weight of all the units, but of such 4 percent not more than one-fourth thereof may be seriously blemished.

(c) (C) *classification.* If the canned white potatoes are fairly free from defects, a score of 28 to 33 points may be given. Canned white potatoes that fall into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" has the following meanings with respect to the various styles of canned white potatoes:

(1) *Whole.* Not more than 1 small piece of harmless extraneous material for each 20 ounces of net weight may be present; not more than a trace of grit may be present; not more than 1 square inch, in the aggregate, of peel may be present for each 20 ounces of net weight; and the aggregate weight of potatoes that are blemished or seriously blemished, and potatoes that possess mechanical damage, or serious mechanical damage does not exceed 30 percent of the weight of all the units, but of such 30 percent not more than one-third thereof or one potato, whichever is the greater in weight, may be seriously blemished or possess serious mechanical damage.

(2) *Sliced; pieces.* Not more than 1 small piece of harmless extraneous material for each 20 ounces of net weight may be present; not more than a trace of grit may be present; not more than 1 square inch, in the aggregate, of peel may be present for each 20 ounces of net weight; and the aggregate weight of all units that are blemished or seriously

blemished does not exceed 15 percent of the weight of all the units, but of such 15 percent not more than one-third thereof or one unit, whichever is the greater in weight, may be seriously blemished.

(3) *Diced; shoestring.* Not more than 1 small piece of harmless extraneous material for each 20 ounces of net weight may be present; not more than a trace of grit may be present; not more than 1 square inch, in the aggregate, of peel may be present for each 20 ounces of net weight; and the aggregate weight of units that are blemished and units that are seriously blemished does not exceed 6 percent of the weight of all the units, but of such 6 percent not more than one-third thereof may be seriously blemished.

(d) (SStd) *classification.* Canned white potatoes that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above U. S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1822 *Texture*—(a) (A) *classification.* Canned white potatoes that possess a good texture may be given a score of 17 to 20 points. "Good texture" means that the texture of the potatoes is typical of properly prepared and properly processed potatoes and that the potatoes are firm and possess a fine and even grain and may possess not more than a slight amount of sloughing that does not materially affect the appearance of the product.

(b) (C) *classification.* If the canned white potatoes possess a fairly good texture, a score of 14 to 16 points may be given. Canned white potatoes that fall into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule) "Fairly good texture" means that the potatoes may be variable in texture, may be slightly coarse-grained, may be slightly hard, may be slightly soft, or may possess more than a slight amount of sloughing or more than a slight amount of disintegration, provided the amount of sloughing or disintegration

does not seriously affect the appearance of the product.

(c) (*SStd*) classification. Canned white potatoes that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above U. S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.1823 *Ascertaining the grade of a lot.* The grade of a lot of canned white potatoes covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 through 52.87; 22 F. R. 3535).

SCORE SHEET

§ 52.1824 *Score sheet for canned white potatoes.*

Size and kind of container.....		-----
Container mark or identification.....		-----
Label.....		-----
Net weight (in ounces).....		-----
Vacuum (in inches).....		-----
Drained weight (in ounces).....		-----
Style.....		-----
Size (of whole potatoes).....		-----
Count (of whole potatoes).....		-----
Factors	Score points	
Color.....	20	{ (A) 17-20 (C) ¹ 14-16 (D) ¹ 0-13
Uniformity of size and shape.....	20	{ (A) 17-20 (C) 14-16 (D) ¹ 0-13
Absence of defects.....	40	{ (A) 34-40 (C) ¹ 28-33 (D) ¹ 0-27
Texture.....	20	{ (A) 17-20 (C) ¹ 14-16 (D) ¹ 0-13
Total score.....	100	
Grade.....		-----
Normal flavor and odor.....		-----

¹ Indicates limiting rule.

Recodified in the Federal Register of December 9, 1953 (18 F. R. 8044) --

Section 52.1823 amended May 22, 1957 (22 F. R. 3535)

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